
4. Diamonds

Program Name: Diamonds.java

Input File: diamonds.dat

Mary is playing a two person game of solitaire called Diamonds with her friend. The object of the game is to accumulate the diamonds with the most value.

The game is started by lining up all 14 of the diamonds on a board in order of value. The value of the cheapest diamond is \$15 and they increase in value by \$5 each until the last diamond has a value of \$80. Each person's turn consists of a coin flip. If the coin lands on heads, the player will select the most expensive diamond available and if the coin lands on tails, the player will select the cheapest diamond available. The players will alternate taking turns.

You have been asked write a program that will simulate the outcome of a given number of games.

For each game, you will need to construct one object of the type `java.util.Random`. This class allows you to specify the seed for the random number generator. For a given seed, the order of the random numbers is always the same.

For each game, there will be two players, A and B. The player A will always go first. The random object will be used to determine the outcome of the coin flips necessary for that game. The coin flip will always result in either a zero or a one. A zero will indicate the coin landed on heads and a one will indicate the coin landed on tails.

Input

The first line of input will contain a single integer `n` that indicates the number of games to follow. Each of the following `n` lines will contain a long which will be the seed for the random object for the simulation.

Output

For each line of input, you will print one of the following:

- `PLAYER A WON` if player A won
- `PLAYER B WON` if player B won, or
- `TIE` if there is a tie.

Example Input File

```
3
54322355
32445664322
345632266777
```

Example Output to Screen

```
PLAYER B WON
PLAYER A WON
PLAYER A WON
```

Random numbers generated for each seed:

```
54322355: 0 0 0 0 1 0 1 1 0 0 1 0 0 0
32445664322: 0 1 0 0 0 0 0 1 0 1 1 0 0 1
345632266777: 0 1 0 1 0 1 0 1 0 1 0 0 1 0
```